

Week ending May 23, 2009



The tile cutting on the Thermal Protection System Ground Test

Article (Photo right) Backshell Panel C was completed. All Ground Test Article (GTA) tiles are modeled waiting to be released. Individual tiles from tile roadmaps for GTA panel "E" and "C" were cut and fit and alignment of individual Tiles for GTA Panel "C" & "E" check is underway.

The preparation of the gore to gore weld tool in preparation for the confidence panels and the gore to gore weld is complete. The data shows acceptable position of welded longerons. Shown below is the Gore to Gore Confidence Panel Weld Side B Tool.



The third "system of struts" Crew Impact Attenuation System (CIAS) test with the rigid pallet and nine struts was conducted.

The impact conditions for this test were expected to generate maximum stroking of about 7 inches for struts no. 7 and 8. Stroking greater than 7 inches occurred and these struts went to the end of travel (8 inch stroke limit) resulting in minor damage to the struts. Data from the test is being compiled and will be studied to understand the actual impact conditions and struts loads and displacements. Swing tests to demonstrate the GTA test technique will be performed at the gantry and CIAS strut testing will resume in early June.

The International Space Station (ISS) Solar Array Electrical Simulator (SAES) from Kennedy Space Center was delivered to Glenn Research Center (GRC). The delivery of a second ISS SAES from Johnson Space Center is being coordinated. GRC is planning to repair these units to support Orion Electrical Power System testing and other JSC sponsored tests.



The Attitude Control Motor DM-1 battery fabrication is complete. Seven of eight pintle guides have been acceptance tested; the data appears good.

Actuators have completed hardware acceptance review. Controller repairs are completed and tested for battery telemetry, field programmable gate arrays, ripple voltage, battery switch circuit base resistor. The Opto-Isolator issue resolution is defined and the initial proof of the fix was conducted, repairs pending.

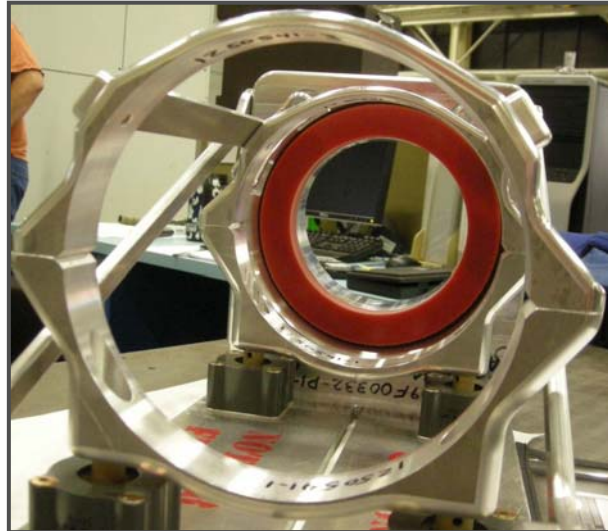


All of the White Sands Missile Range gantry work platforms, stairs, walkways, and handrails for gantry levels 9 through 11 have been installed (Photo top of Page 2).

Work continues to torque the bolts on the upper levels of the gantry. All of the gantry minimal electrical installation has been completed, except for one area where regular electrical had been installed. The gantry construction work is continuing on schedule to be completed by the first week in June for the gantry roll test.



The CEV parachute development system sets of drogue and 3 sets of pilot mortar hardware assemblies are completed. Shown below is the Pad Abort 1 Pilot Mortar Mount (Johnson Space Center Test Unit).



Communications, Public Engagement and Recognition

Congressman John Culberson (R-TX-7) visited NASA Johnson Space Center on Wednesday, May 27. As part of his tour, Culberson observed Orion crew exploration vehicle mockup evaluations that are part of a task-based series designed to exercise the crew module pressurized volume. Culberson's Space Legislative Assistant Brittany Seabury, toured Lockheed Martin's Exploration Development Lab - Houston earlier in the day and received a program briefing update on Orion and progress toward Preliminary Design Review.

Citizens for Space Exploration – a grassroots pro-space effort – held its annual trip to Washington, D.C. for meetings on Capitol Hill in support of NASA and America's human space exploration program. 115 individuals – including 26 university students – with representation from 24 states participated in the Citizens trip. Citizens teams met with 341 House and Senate member offices during their two-day trip (May 19-20) – including 92% of Senate and 84% of House freshman offices. Reaction from Congressional offices to these visits was overwhelmingly positive – reflecting good bi-partisan support for NASA and exploration – with the themes of education, jobs, healthcare and US leadership deemed most important in terms of their connection to space.

Shown right is Rep. Gabrielle Giffords (D-AZ-8), Chair of the House Space & Aeronautics Subcommittee, speaking to a group of Citizens for Space Exploration participants on the steps of the U.S. Capitol. Giffords expressed her strong support for NASA and the Constellation Program and urged the Citizens group to build close working relationships with Members and staff of Congress in their efforts to promote human space exploration.

